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10/519,978	01/03/2005	William B. O'Neal	3165-113	3208

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ROTHWELL, FIGG, ERNST & MANBECK, P.C.
1425 K STREET, N.W.
SUITE 800
WASHINGTON, DC 20005

EXAMINER	
HOLT, ANDRIAE M	

ART UNIT	PAPER NUMBER
4133	

NOTIFICATION DATE	DELIVERY MODE
10/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No.	Applicant(s)	
	10/519,978	O'NEAL ET AL.	
	Examiner	Art Unit	
	Andriae M. Holt	4133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/3/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-33 are pending in the application. Claims 1-33 will be examined on the merits.

Priority

Priority to PCT/EP03/07321 filed on July 8, 2003, which claims priority to Provisional Application No. 60/393,740 filed on July 8, 2002 is acknowledged.

Information Disclosure Statement

Receipt of Information Disclosure Statement filed on January 3, 2005 is acknowledged.

Miscellaneous Remarks

The examiner notes that Applicant claims a synergistic herbicidal mixture. Examiner notes that components C and D are optional components of the herbicidal mixture in independent claim 1; therefore, tables 5-12, pages 47-50 of the specification, are not being evaluated for synergism. Examiner notes tables 3 and 4, page 46 of the specification, discloses results for compound Ia.29 and compound II. Compound Ia.29 is a single species in the broad genus that is being claimed in independent claims 1, 8 and 29. A single species cannot show purported unexpectedness of an entire genus. Therefore, the examiner cannot determine based on a single species that has been tested, if the entire genus would produce the purported synergism when combined with component B. Examiner also notes that in tables 3 and 4, the percent damage is based on application rates, which changes based on the concentration. It appears that as

the application rates and the concentrations change, so will the rate of damage on the undesired crops, i.e. the higher the application rate or the concentration, the higher the damage rate. However, the examiner cannot conclusively determine if the application rates and the concentration have an effect on synergism when compound 1a.29 is combined with component B. Therefore, examiner notes that the claims are not commensurate in scope.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Sievernich et al. (CA 2,334,955) and Baltruschat et al. (US 2002/0055435).

Applicant's Invention

Applicant claims a herbicidal mixture comprising component A, a 3-heterocyclyl-substituted benzoyl derivative, component B, a synergistically effective amount of the compound of formula II (foramsulfuron), component C, if desired, at least one herbicidal compound selected from the group consisting of at least one of acetyl-CoA carboxylase inhibitors, acetolactate synthase inhibitors, amides, auxin herbicides, auxin transport inhibitors, carotenoid biosynthesis inhibitors, enolpyruvylshikimate 3-phosphate synthase inhibitors, glutamine synthase inhibitors, lipid biosynthesis inhibitors, mitosis inhibitors, protoporphyrinogen IX oxidase inhibitors, photosynthesis inhibitors, synergists, growth substances, cell wall biosynthesis inhibitors or a variety of other herbicides and component D, if desired, a safener selected from isoxadifen, mefenpyr and fenclorazol. Applicant claims a process for preparation of the herbicidal composition and a method of controlling undesired vegetation.

Determination of the scope of the content of the prior art

(MPEP 2141.01)

Sievernich et al. teach a synergistic herbicidal mixture comprising at least one 3-heteroxyxlyl-substituted benzoyl derivative or its environmentally compatible salts and a synergistically effective amount of at least one herbicidal

compound from the group of the acetyl-CoA carboxylase inhibitors, acetolactate synthase inhibitors, amides, auxin herbicides, auxin transport inhibitors, carotenoid biosynthesis inhibitors, enolpyruvylshikimate 3-phosphate synthase inhibitors, glutamine synthase inhibitors, lipid biosynthesis inhibitors, mitosis inhibitors, protoporphyrinogen IX oxidase inhibitors, photosynthesis inhibitors, synergists, growth substances, cell wall biosynthesis inhibitors or a variety of other herbicides (page 1, lines 4-40-1a, lines 1-6) (claims 1 and 29, component A and component C, instant invention). Sievernich et al. teach that the most particularly preferred 3-heterocyclyl-substituted benzoyl derivatives include 4-2-[chloro-3-(3-methyl-isoxazol-5-yl)-4-methylsulfonylbenzoly]-1-methyl-5-hydroxy-1H-pyrazole (page 19, lines 24-26) and 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole (page 20, lines 19-21) (claims 1-9, 14-21, and 29, instant invention). Sievernich et al. teach that suitable components B are cyclohexenone oxime ethers, phenoxyphenoxypropionic esters, arylaminopropionic acids, imidazolinones, pyrimidyl ethers, sulfonamides, sulfonyl ureas, pyridine carboxylic acids, anilides, chloroacetanilides, thioureas, carbamates, dinitroanilines, pyridines, diphenyl ethers, oxadiazoles, cyclic imides or pyrazoles, benzothiadiazinones, dinitrophenols, dipyridylenes, ureas, phenols, triazines, triazinones, uracils, biscarbamates, oxiranes, aryloxyalkanoic acids, quinolinecarboxylic acids, dichloropropionic acids, dihydrobenzofurans, and phenylacetic acids(page 2, lines 44-47-page 3, lines 1-20)(claims 10-13, specific classes of component C, instant invention).

Sievernich et al. further teach herbicides, which can be used in combination with the 3-heterocyclyl-substituted benzoyl derivatives, include, acetyl-CoA carboxylase inhibitors such as alloxydim, clethodim, clodinafop-propargyl, diclofop-methyl, and fenoxaprop-ethyl. (page 3, lines 28-46-page 4, line 1). Sievernich et al. further teach acetolactate synthase inhibitors, which can be used in combination, include imazapyr, florasulam and amidosulfuron (page 4, lines 3-26). Sievernich et al. teach amides that can be used in combination include allidochlor (CDAA) (page 4, lines 28-31). Sievernich et al. teach auxin herbicides and auxin transport inhibitors that can be used include clopyralid and diflufenzopyr, respectively (page 4,lines 33-39). Carotenoid biosynthesis inhibitors that can be used include isoxaflutole (page 4, lines 41-46). Enolpyruvylshikimate-3-phosphate synthase inhibitors and lipid biosynthesis inhibitors that can be used in combination include glyphosate and mefenacet, respectively (page 5, lines 1-20). Sievernich et al. further teach mitosis inhibitors and protoporphyrinogen IX oxidase inhibitors include pendimethalin and acifluorfen, respectively (page 5, lines 22-45). Sievernich et al. further teach photosynthesis inhibitors that can be used in combination included pyridate, bentazone and atrazine (page 5, line 46-page 6, lines 1-22) (claims 10-21, 23 and 29, specific compounds for component C, isoxaflutole, atrazine, bentazone, and pyridate, instant invention).

Sievernich et al. teach that as a rule, the mixture comprise components A) and B) in such weight ratios that the synergistic effect takes place. The ratios of component A) and B) in the mixture preferably range from 1:0.002 to 1:800 (page

38, lines 20-24)(claim 25, ratio, instant invention). Sievernich et al. further teach that the herbicidal compositions have an herbicidally active amount of a synergistic herbicidal mixture and at least one liquid and/or solid carrier and if desired, at least one surfactant (page 2, lines 8-11) (claims 27-28 and 33, solid and/or liquid carrier and surfactant, instant invention). Sievernich et al. teach the invention relates to processes for the preparation of the compositions and to a method of controlling undesirable vegetation (page 2, lines 13-15)(claims 28-29, process of preparation and method of controlling undesired vegetation, instant invention). Sievernich et al. teach that the active ingredients of components A) and B) can be formulated jointly, but also separately, and/or applied to the plants, their environment and/or seeds jointly or separately (page 37, lines 31-33)(claims 29-30, applied to vegetation and/or seeds, instant invention). Sievernich et al. teach it is preferable to apply the active ingredients simultaneously, but it is possible to apply them separately (page 37, lines 33-35) (claims 31-32, applied simultaneously or in succession, instant invention). Sievernich et al. further teach the mixtures can be applied pre-or post-emergence and that in the case of post-emergence treatment of the plants (page 38, lines 1-2), the herbicidal compositions according to the invention are preferably applied by foliar application (page 38, lines 11-13)(claims 30, mixture and, applied to leaves, instant invention).

Baltruschat et al. teach an herbicidal composition comprising as active ingredient, a synergistically effective amount of 1) at least one 2-phenyl-4-(hetero-)aryloxy-pyrimidines of formula I, 2) at least one additional herbicidal

compound, which is active against broad-leaved weeds and/or annual grasses and/or 3) at least one additional safening compound (page 1, col. 1, paragraphs 4-13). Baltruschat et al. teach that compounds of group 2 can be selected from any one of the following lipid biosynthesis inhibitors, such as tri-allate; acetolactate synthase inhibitors, such as foramsulfuron (page 4, paragraph 83)(claims 1, 8 and 29, compound B, instant invention); photosynthesis inhibitors, such as atrazine, bentazone, and pyridate (page 4, paragraphs 89-page 5, paragraphs 98-99); and bleacher herbicides such as isoxaflutole (page 5, paragraph 108); enolpyruvylshikimate 3-phosphate synthase inhibitors, such as glyphosate; glutamine synthase inhibitors, such as glufosinate; mitosis inhibitors, such as pendimethalin; auxin herbicides, such as clopyralid; auxin transport inhibitors, such as diflufenzopyr (pages 4-6, paragraphs 64-133)(claims 1, 10-21, 23 and 29, compound C, instant invention). Baltruschat et al. teach that as a rule, the ratio (by weight) of the compound of formula I to the additional herbicidal compound of group (2) is from 1:0.002 to 1:800 (page 12, paragraph 534)(claim 24, ratios of compounds A and B, instant invention).

Baltruschat et al. teach examples of safeners of group 3 include fenchlorazole, isoxadifen, and mefenpyr (page 7, paragraph 193) (claims 1, 22 and 29,safener, fenchlorazole, isoxadifen, and mefenpyr, instant invention). Baltruschat et al. teach the ratio by weight of the compound of formula I to the additional safening compound of group 3 is as a rule from 1:0.002 to 1:800 (page 13, paragraph 536) (claim 26, ratios of compounds of group A and D, instant invention).

Baltruschat et al. teach solvents (liquid carries), solid carriers and surfactants may be employed (page 13, paragraphs, 542-543 and 545) (claims 27-28 and 33, liquid and/or solid carrier and at least one surfactant, instant invention). Baltruschat et al. teach that the compositions may be applied by pre- or post-emergence treatment. Baltruschat et al. define pre-emergence application as application to the soil in which the weed seeds or seedlings are present (page 11, paragraph 527) (claims 29-30, applied to seedling or leaves of undesired plants, instant invention). Baltruschat et al. teach that the invention provides a method for controlling the growth of weeds to a crop locus/and or reducing crop injury which comprises applying to the locus a compound of formula I as defined above and a component which is selected from those listed above as group 2 and/or a component which is selected from those listed above as group 3. Especially the application in cereals is preferred (page 11, paragraph 519) (claim 29, method of treating undesired vegetation, undesired plants, in their habitation, leaves, instant invention).

Baltruschat et al. further teach that the active compounds can be used in the form of a mixture of separate formulations, typically mixed with water prior to application, or as separate formulations applied individually within a certain time interval (page 13, paragraph 537) (claims 29, 31-32, applied simultaneously or in succession and mixture, instant invention).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Sievernich et al. do not teach a safener. It is for this reason Baltruschat et al. is joined.

Baltruschat et al. do not teach component A, a 3-heterocyclyl-substituted benzoyl derivative. It for this reason Sievernich et al. is joined.

Finding a prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Sievernich et al. and Baltruschat et al. to produce an effective herbicidal composition. As taught by Sievernich et al., the herbicidal combinations of 3-heterocyclyl-substituted benzoyl derivative and various herbicides that are active against broad leaf weeds and grasses provide a synergistic effective in eradicating the undesirable plants. It is known in the art and as taught by Baltruschat et al. that adding a safener to a herbicide increases the activity of the herbicides and protects the desired plants against damage from the herbicides being applied. Thus, in view of *In re Kerkhoven, 205 USPQ 1069 (C.C.P.A. 1980)*, it is *prima facie* obvious to combine two or more compositions each of which is taught by prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in prior art, thus claims that requires no more than mixing together two or three conventional herbicides set forth prima facie obvious subject matter. Therefore,

one skilled in the art at the time of invention would have been motivated to combine herbicides to increase the efficacy of a herbicide such that the maximum level of control or growth regulation for a given application rate of a herbicide is increased, or alternatively, the application rate of a herbicide giving optimum control or growth regulation can be reduced.

None of the claims are allowed.

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andriae M. Holt whose telephone number is 571-272-9328. The examiner can normally be reached on 9:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Stucker can be reached on 571-272-0911. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Andriae M. Holt
Patent Examiner

Primary Examiner
AU 1616